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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,204	09/12/2003	Huy M. Nguyen	060809-0127-US	9109
38426	7590	08/09/2005	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP/RAMBUS INC. 2 PALO ALTO SQUARE 3000 EL CAMINO REAL PALO ALTO, CA 94306			CHO, JAMES HYONCHOL	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/662,204

Applicant(s)

NGUYEN ET AL.

Examiner

James Cho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 18-33 is/are allowed.  
6) ☒ Claim(s) 1, 9, 12 and 34 is/are rejected.  
7) ☒ Claim(s) 2-8, 10, 11 and 13-17 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 07 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/05.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 2-24-2005 has been entered.

### ***Oath/Declaration***

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:  
It was not executed in accordance with either 37 CFR 1.66 or 1.68.

The second inventor's signature is missing on the oath filed March 2, 2005.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 9, 12 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Otsuka et al. (US PAT No. 6,307,791).

Regarding claims 1 and 34, Figs. 4 and 6 of Otsuka et al. teaches an output driver comprising: an output port (68 in Fig. 4) configured to output a data signal; a level shifter (output buffer 70 in Fig. 4; 70 shifts the level from the output of 64) configured to drive a current to said output port in response to an input signal (output signal of 64); an adjustable impedance controller (Ra, Rb, N20, OP1, OP4, P1-3, N1, N2, and RQ generate an adjustment signal at the node, REFIU as well as REFID) configured to generate an impedance adjustment signal; and an output impedance compensator (213 adjusts the impedance of the output buffer 70 based on the reference voltage VZQ and the signal at node REFIU and REFID) configured to adjust the impedance of said level shifter in accordance with said impedance adjustment signal and in accordance with a reference voltage.

Regarding claim 9, Figs. 4 and 6 of Otsuka et al. teaches the output driver circuit of claim 1 where the adjustable impedance controller is configured to generate the impedance adjustment signal in response to a programmable input (the resistor RQ is for specifying a target impedance value, i.e. user defined/programmable ; col. 8, lines 18-24).

Regarding claim 12, Figs. 4 and 6 of Otsuka et al. teaches the output driver circuit of claim 9, wherein the programmable input is based at least in part on one or more characteristics of a system in which the output driver is used (the value of RQ is for target impedance value; col. 8, lines 18-24).

***Allowable Subject Matter***

Claims 18-33 are allowable over the prior art of record.

Claims 2-8, 10-11, and 13-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: one of ordinary skill in the art would not have been motivated to modify the teaching of Otsuka et al. to further includes, among other things, the specific of a first transistor for providing electro-static discharge protection as required by claims 2 and 18, the operational amplifier circuit having a positive input terminal coupled to a reference voltage input through a first resistor and a negative input terminal coupled to circuit ground through a second resistor as required by claim 6, the adjustable impedance controller including a memory array and a decoder configured to access the memory array in response to the programmable input as required by claim 10, a tracking circuit including at least one monitor selected from the group consisting of: a process and temperature monitor, a frequency monitor and a voltage supply monitor as required by claim 13.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

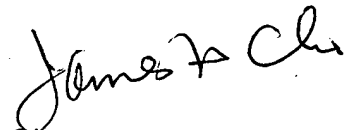
Taylor et al. (US PAT No. 6,157,206) discloses an impedance control circuit controlling the output impedance.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Cho whose telephone number is 571-272-1802. The examiner can normally be reached on M-F 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James H. Cho  
Primary Examiner  
Art Unit 2819

8-2-05